

**ABSTRACT OF THE DISCLOSURE**

[1051] The present application describes a method and a processor for handling register dependency conflicts between lesser and greater width instructions, colloquially referred to as “evil twins.” If there is a register dependency between a greater width producer instruction and a lesser width consumer instruction, a greater width source register is substituted for the source register specified by the lesser width producer. If there is a register dependency between a lesser width producer instruction and a greater width producer instruction, the greater width consumer instruction is replaced by multiple helper instructions. One or more of the helper instructions merge lesser width registers aliased onto the source registers specified by the greater width consumer instruction, into temporary registers. Another helper instruction executes the greater width consumer instruction using the temporary registers instead of the original source registers.